

Notice of Allowability

Application No.

10/036,117

Examiner

Khanh Tran

Applicant(s)

YIN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed on 09/13/2005.
2. ☒ The allowed claim(s) is/are 1-44.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

1. The Amendment filed on 09/13/2005 has been entered. Claims 1-44 are pending in this Office action.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Jonathan M. Harris, Registration No. 44,144, Tel. # 713-238-8000 on 11/28/2005.

Regarding claim 8, in line 1, "A trailing bit detector" has been changed to -- A digital circuit --.

Response to Arguments

3. Applicant's arguments, see pages 13-15, filed on 09/13/2005, with respect to claims 25-26 and 29-30 have been fully considered and are persuasive. The rejection of claims 25-26 and 29-30 has been withdrawn.

4. The Drawings filed on 12/26/2001 has been accepted.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

5. Claims 1-7 are allowed.

Regarding claim 1, claim 1 is allowed over prior art of record because the cited references do not teach or suggest a digital circuit configured to locate and output binary encoded position of a leading bit of a desired value in an input string of bits comprising plurality of input encoders, a plurality of bit value detectors, an encoder arbitrator, a most significant sub-string encoder as set forth in the application claim. The closest prior art, Watanabe US 6259753 B1 disclosing a data sync signal detecting device, either singularly or in combination, fails to anticipate or render the above underlined limitations obvious.

6. Claims 8-14 are allowed.

Regarding claim 8, claim 8 is allowed over prior art of record because the cited references do not teach or suggest a digital circuit configured to locate and output binary encoded position of a trailing bit of a desired value in an input string of bits comprising plurality of input encoders, a plurality of bit value detectors, an encoder arbitrator, a least significant sub-string encoder as set forth in the application claim. The closest prior art, Watanabe US 6259753 B1 disclosing a data sync signal detecting device, either singularly or in combination, fails to anticipate or render the above underlined limitations obvious.

7. Claims 15-19 are allowed.

Regarding claim 15, claim 15 is allowed over prior art of record because the cited references do not teach or suggest a method of locating and indicating the position of a leading binary bit value in a string of bits as set forth in the application claim. The closest prior art, Watanabe US 6259753 B1 disclosing a data sync signal detecting device, either singularly or in combination, fails to anticipate or render the above underlined limitations obvious.

8. Claims 20-24 are allowed.

Regarding claim 20, claim 20 is allowed over prior art of record because the cited references do not teach or suggest a method of locating and indicating the position of a trailing binary bit value in a string of bits as set forth in the application claim. The closest prior art, Watanabe US 6259753 B1 disclosing a data sync signal detecting device, either singularly or in combination, fails to anticipate or render the above underlined limitations obvious.

9. Claims 25-28 are allowed.

Regarding claim 25, claim 25 is allowed over prior art of record because the cited references do not teach or suggest a method of locating and indicating the position of a leading binary bit value in a input string of bits comprising "locating the position of the leading binary bit value in each substring and generating a first binary representation of this position for each substring" and "identifying a most significant substring that

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includes the most significant bit value in the input string and generating a second binary representation of this substring" and "combining the first binary representation corresponding to the most significant substring and the second binary representation..."

The closest prior art, Watanabe US 6259753 B1 disclosing a data sync signal detecting device, either singularly or in combination, fails to anticipate or render the above underlined limitations obvious.

10. Claims 29-32 are allowed.

Regarding claim 29, claim 29 is allowed over prior art of record because the cited references do not teach or suggest a method of locating and indicating the position of a leading binary bit value in a input string of bits comprising "locating the position of the trailing binary bit value in each substring and generating a first binary representation of this position for each substring" and "identifying a least significant substring that includes the least significant bit value in the input string and generating a second binary representation of this substring" and "combining the first binary representation corresponding to the least significant substring and the second binary representation...".

The closest prior art, Watanabe US 6259753 B1 disclosing a data sync signal detecting device, either singularly or in combination, fails to anticipate or render the above underlined limitations obvious.

11. Claims 33-38 are allowed.

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Regarding claim 33, claim 33 is allowed over prior art of record because the cited references do not teach or suggest a digital circuit for generating a binary encoded position of a leading bit value in an input string of bits comprising an input encoder means, a bit value detector means, an output encoder means, an arbitrator means as set forth in the application claim. The closest prior art, Watanabe US 6259753 B1 disclosing a data sync signal detecting device, either singularly or in combination, fails to anticipate or render the above underlined limitations obvious.

12. Claims 39-44 are allowed.

Regarding claim 39, claim 39 is allowed over prior art of record because the cited references do not teach or suggest a digital circuit for generating a binary encoded position of a trailing bit value in an input string of bits comprising an input encoder means, a bit value detector means, an output encoder means, an arbitrator means as set forth in the application claim. The closest prior art, Watanabe US 6259753 B1 disclosing a data sync signal detecting device, either singularly or in combination, fails to anticipate or render the above underlined limitations obvious.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Urata U.S. Patent 6,128,358 discloses "Bit Shift Detecting Circuit And Synchronizing Signal Detecting Circuit".

Gilbert et al. U.S. Patent 6,560,288 B1 discloses "Method And System For Variable Length Decoding".

Luna et al. U.S. Patent 6,560,288 B1 discloses "System And Method For Decoding A Variable Length Code Digital Signal".

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 571-272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KCT

Pham Cong Tran 11/25/2005

Examiner KHANH TRAN